THE GEORGE WASHINGTON UNIVERSITY

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THE TOP MANAGEMENT ORGANIZATION OF THE BUREAU OF SHIPS

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PREFACE

The selection of the top management organization of the Navy Department's Bureau of Ships as the topic for a thesis was not the result of any evidence or opinion that the present organization is ineffective. Rather, this study stems from an interest in the principles of organization in general, and in the organization of the Bureau of Ships in particular. This interest developed during several assignments in different parts of the Bureau (Ship Design, Ship Types, and Field Activities) over periods totaling about five years.

I am proud of my past associations with the Bureau, and greatly admire the capable officers and civilians who administer the Bureau and its field activities. My status as a student in the Navy Graduate Comptrollership Program at the George Washington University provided this opportunity for an objective study of the Bureau's top management organization with a view toward possibly making some worthwhile contribution. The undertaking of this study was sanctioned by the Deputy Chief of the Bureau of Ships.

To some extent this study reflects the views of various present and former key officials of the Bureau. Without their friendly cooperation this thesis would not have been possible. Mr. Joseph W. Crane, Director of the Administrative Management Division, Bureau of Ships, was particularly helpful in furnishing

background information and in giving me the benefit of his views. I am also indebted to Dr. A. Rex Johnson and Dr. Richard N. Owens of the staff of The George Washington University for valuable guidance. The conclusions and recommendations are, of course, solely my own.

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CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of this study is to determine what changes in the top management organization of the Navy Department's Bureau of Ships may be desirable in the light of current major trends in Congressional interest, scientific management and technology, and in accordance with recognized principles of organization.

Luther Gulick has drawn attention to the dynamic character of organization in his "Notes on the Theory of Organization."[1]

> An organization is a living and dynamic entity. Each activity is born, has its periods of experimental development, of vigorous and stable activity, and, in some cases, of decline. A principle of organization appropriate at one stage may not be appropriate at all during a succeeding stage. In any government various parts of its work will always stand at different stages of their life cycle. It will therefore be found that not all of the activities of any government may be appropriately departmentalized neatly on the basis of a single universal plan. Time is an essential element in the formula.
>
> Another variable is technological development. The invention of machines, the advance of applied science, the rise of new specializations and professions, changes in society and in the way men work and move in their private life must be continually reflected in the work of government, and therefore in the structure of government.

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[1]Luther Gulick, "Notes on the Theory of Organization," Papers on the Science of Administration, quoted in Albert Lepawsky, Administration (New York: Alfred A. Knopf, 1949), p. 388.

Current Major Trends That Have an Influence on the Bureau's Organization

Congressional interest. Congress has shown great interest in the organization of the Executive Branch of the Government in general, and of the Department of Defense in particular. This is evidenced by the declaration of policies by Congress in establishing the Commission on Organization of the Executive Branch of the Government (Hoover Commission), as follows:

> It is hereby declared to be the policy of Congress to promote economy, efficiency and improved service in the transaction of the public business in the departments, bureaus, agencies, boards, commissions, offices, independent establishments, and instrumentalities of the executive branch of the Government by -
>
> (1) recommending methods and procedures for reducing expenditures to the lowest amount consistent with the efficient performance of essential services, activities and functions;
> (2) eliminating duplication and overlapping of services, activities and functions;
> (3) consolidating services, activities and functions of a similar nature;
> (4) abolishing services, activities and functions not necessary to the efficient conduct of government;
> (5) eliminating nonessential services, functions, and activities which are competitive with private enterprise;
> (6) defining responsibilities of officials; and
> (7) relocating agencies now responsible directly to the President in departments or other agencies.[2]

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[2]Section 1., Public Law 108-83rd Congress, Chapter 184-1st Session, quoted in Commission on Organization of the Executive Branch of the Government (Second Hoover Commission), Final Report to the Congress (Washington: Government Printing Office, 1955).

The Hoover Commission has made a number of comprehensive studies of the Executive Branch in line with this declaration of policy by Congress. The Commission's recommendations are in various stages of implementation or consideration.

Title IV, National Security Act of 1947, as amended in 1949 is an important piece of legislation directly affecting the organization and management of the Department of Defense. The purpose of Title IV, which established Comptrollers for the Department of Defense and for each of the military departments, is to provide the machinery for placing the operations of the military services on a more businesslike basis. In 1953 the Senate investigated the extent to which Title IV had been implemented. In opening the hearings, Senator Flanders made the following statement:

> Our job is to inquire into the extent to which the law has been put to work since 1949 and the result of its use in terms of efficiency and economy. Let the record be clear. We do not write this off as a simple problem. We realize that the national defense is a most pressing problem. We devote tremendous amounts of our manpower and wealth to it. We want to insure that we work efficiently, and that we spend wisely; that we buy what we need and know what we have in our inventories. Business managers have to adhere to these rules. Our defense people must be in a position to give us the necessary guaranties of protection at the lowest cost in men and money.[3]

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[3] U. S. Congress, Senate, Preparedness Subcommittee No. 3 (Senator Flanders, Chairman), of the Committee on Armed Services, Hearings on Implementations of Title IV, National Security Act of 1947, as Amended (Washington: Government Printing Office, 1954), p. 2.

Scientific management. Since the turn of the century there have been a number of developments in scientific management. Lamperti and Thurston have expressed these developments in terms of cycles, as follows:

> A review of the history of scientific management will show that in each decade the spotlight of attention has shifted from one area of management to another, and that the cyclical span from initial recognition of the importance of a new area until its final wide acceptance has exceeded 25 years.
>
> Management Control Cycle -- The 1940's and 1950's will go down in the history of the scientific management movement as marking the active recognition of management control as the next great area to receive the attention of management leaders. There is, however, probably no phase of management less understood than management control. Very little has been written about it and even less done. What has been written is largely theoretical, discussing basic principles, but not explaining practical means for putting this theory into practice. Yet this is understandable, since we are not even halfway through the usual cycle between the initial general recognition of a new area of scientific management and its final widespread acceptance throughout industry and government.[4]

Technology. In January, 1955, the submarine NAUTILUS became the first vessel to be underway on nuclear power. Guided missiles installations have been made in submarines and surface vessels. Continued, rapid developments in nuclear propulsion and guided missiles are creating a revolution in ship design and operations. The need for our Navy to be in the forefront

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[4] Frank A. Lamperti and John B. Thurston, Internal Auditing for Management (New York: Prentice-Hall, Inc., 1953), pp. 10, 12.

of any potential enemy presents a great challenge to our scientific, engineering and managerial capabilities.

Scope of the Study

The scope of this study is limited primarily to those executives who report directly, or via the Deputy Chief, to the Chief of the Bureau. Except for taking the Policy Committee (Planning Council) into consideration during the course of the study, no attempt has been made to explore the functions or composition of committees.

Sources of Information and Ideas

In carrying out this study, reference was made to history, regulations, manuals, Congressional legislation, reports by the Hoover Commission, Navy Department and other management research studies, and texts and treatises by recognized authorities on management and organization. These references are listed in the Bibliography. This study also reflects information derived from representatives of numerous major industries who made presentations for the Navy Graduate Comptrollership Program at The George Washington University. The staff of The George Washington University also furnished valuable guidance. In addition, full advantage was taken of the opportunity to discuss various phases of the study with cognizant officials of the Bureau of Ships. These officials, all of whom were most cooperative, are identified in Appendix I.

CHAPTER II

PRINCIPLES AND CONCEPTS OF ORGANIZATION

In order to lay a proper foundation for an analysis of the top management organization of the Bureau of Ships, it appears desirable to set forth certain applicable principles and concepts advocated by recognized authorities on organization.

Primary Methods of Dividing Work

In discussing organization structure, Dr. Richard N. Owens has expressed the following concepts:

> Organization is the formal structure for the assignment of duties and authority through which the major activities of work and their subdivisions are arranged, defined and co-ordinated. It is the means whereby the activities of many persons are co-ordinated and directed in a common enterprise or endeavor. It is the form of human association for the common purpose. It establishes the framework within which people work. It pertains to the positions of the members and also to the interrelations of their duties.
>
> Several methods of dividing work and assigning tasks are possible. The methods used at the top levels are not necessarily the same as the methods used at lower levels. Below the level of the chief executive, work may be divided on the basis of operating divisions, functions, geographical areas, products, and customers. Usually no one basis is consistently followed, however, as some activities may be organized along different lines.[5]

Line and Staff

Another approach to the division of work is in terms of line and staff. Ernest Dale has defined the three possible

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[5]Richard N. Owens, Introduction to Business Policy (Homewood, Illinois: Richard D. Irwin, Inc., 1954), pp. 65,69.

major groupings in an organization as line, staff specialists and staff assistants ("assistants to").

> Line activities are those functions which follow one another as stages of major operations. These are sequential activities. One such activity is production. In addition, there are services common to line, which are grouped under major functions (hence "functionalization") -e.g., finance and personnel - and which are handled by staff specialists. These specialists are distinguished from line in that their authority is indirect, not direct; functional, not operating; and their responsibility specialized, not general.
>
> The possible types of staff specialist activities vary greatly among companies. They may be summarized as follows: (1) staff advice, (2) operating service, and (3) direct command.
>
> Similary, when the job of an executive begins to exceed his capacity, he may consider appointing an "assistant to" himself.
>
> Since the "assistant to" or staff assistant cannot delegate, no one owes any responsibility to him.
>
> The assistant helps his chief in his work. He has been well described as "an extension of his chief's personality," whose job it is to "worry about the problems that worry the boss." The "chief" may be a line executive or staff specialist. Or he may be the company president.
>
> To sum up, in Lt. Col. Urwick's remarks to the AMA survey, "the 'Assistant to' is. . . .essentially a man who represents his chief in matters of administrative detail. His functions are limited to study, research, analysis, recommendation and, above all, to helping his chief to get things done by handling the publication of instructions, etc., watching the organization, and foreseeing and forestalling any failure in coordination between the specialists and the 'line'. He has no executive duties."[6]

With respect to "line", Organization Planning for Naval Units[7] also contains a particularly clear definition, as

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[6]Ernest Dale, Planning and Developing the Company Organization Structure (New York: American Management Association, 1952), pp. 63, 71.

[7]Organization Planning for Naval Units (NavPers 18371), Prelim. ed. (Washington: Bureau of Naval Personnel, Navy Department, 1955), p. 3-3.

follows: "It (the term 'line') indicates those functions that contribute directly to accomplishing the primary objective of the organization."

It is of interest to note that Harlow H. Curtice, the President of the General Motors Corporation, attributes a great deal of the success of that industrial giant to its "line and staff" type of organization. He recently expressed the following views:

> He (Mr. Sloan) realized that centralization, properly established, makes possible directional control, coordination, specialization, and resulting economies. He also realized that decentralization, properly established, develops initiative and responsibility; it makes possible a proper distribution of decisions at all levels of management, including the foreman--with resulting flexibility and cooperative effort, so necessary to a large-scale enterprise. His objective was to obtain the proper balance between these two apparently conflicting principles of centralization and decentralization in order to obtain the best elements of each in the combination. He concluded that, to achieve this balance so necessary for flexibility of operation, General Motors management should be established on a foundation of centralized policy and decentralized administration.
>
> In pursuance of that plan, each of the various operations was established as an integral unit under a General Manager. Then, those operations which had a common relationship were grouped under a Group Executive for coordinating purposes. These Group Executives reported to the President who was the Chief Executive officer.
>
> To perform those functional activities that could be accomplished more effectively by one activity in the interest of the whole and to coordinate similar functional activities of the different operating units and promote their effectiveness, a General Staff, and in addition, Financial and Legal Staffs, were established to operate on a functional basis.
>
> Over a period of years, the functions of the General Staff have varied and have been expanded with business experience and changed conditions but within the framework of the general concept. Today, the General Staff concerns itself with the following functions: distribution, engineer-

ing, manufacturing, personnel, public relations, research and styling.

Since the adoption of the foregoing plan of organization, each staff Vice President has been a coordinating executive and has no direct authority over the operating units or their departments. With his staff he contributes to the development of better and more advanced policies and programs within his functional area through research and study. Certain of these staffs cooperate directly with those departments of the operating units whose activities are in the same functional areas. This provides coordination for the divisional operations, which are subject to local leadership and have local responsibility for functioning.[8]

Coordination

Coincident with the division of work, it is necessary to maintain proper coordination. James D. Mooney has stressed the importance of coordination, as follows:

> Coordination, therefore, is the orderly arrangement of group effort, to provide unity of action in pursuit of a common purpose.
>
> When we call coordination the first principle, we mean that this term expresses the principles of organization in toto; nothing less. This does not mean that there are no subordinated principles; it simply means that all the others are contained in this one of coordination. The others are simply the principles through which coordination operates and thus becomes effective.[9]

Norman N. Barish's views on coordination are also of interest, as follows:

> Other things being equal, functions should be allocated amongst the various organizational units so as to minimize

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[8]Harlow H. Curtice, The Development and Growth of General Motors, Statement by the President, General Motors, before Subcommittee on Antitrust and Monopoly of the U. S. Senate on the Judiciary, Washington, D. C., Dec. 2, 1955 (Detroit: General Motors Corporation, 1955), p. 8.

[9]James D. Mooney, The Principles of Organization, Rev. ed. (New York, Harper and Bros., 1947), p. 5.

> the amount of required coordination, communication and paperwork.
>
> The greater the amount of required coordination, communication, and paperwork, the slower the operations; the greater the possibility of mistakes; the larger the number of required checks; and the more expensive the operations.[10]

Elmore Petersen and E. Grosvenor Plowman have this to say about the point in the organization at which coordination should take place:

> The point at which coordination between different executive activities must take place is of great importance. Only a small number of problems of greatest significance should be coordinated by the company president or top executive. It follows that the top executive of a business must select executives and assign their duties in such a manner as to keep at a minimum his own personal coordination problems.[11]

Organization Planning for Naval Units[12] also emphasizes that "the organization structure of a command should be as simple as possible and the number of organizational units should be kept at a minimum."

Span of Control

Span of control is related to coordination. Quoting Dr. Richard N. Owens,

> The number of subordinates that one person can effectively

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[10]Norman N. Barish, Systems Analysis for Effective Administration (New York: Funk and Wagnalls Co., 1951), p. 14.

[11]Elmore Petersen and E. Grosvenor Plowman, Business Organization and Management, Rev. ed. (Chicago: Richard D. Irwin, Inc., 1949), p. 158.

[12]Organization Planning for Naval Units, op. cit., p. 2-3.

supervise is called the "span of control." Although the number is limited, no exact figure can be given as to the proper number of subordinates for one person. While the median number of persons reporting to the chief executive is eight, the number ranges from one to thirty-five.

Several reasons may be given for limiting the span of control. Reducing the number of subordinates will decrease the demands upon the executive by decreasing the number of conferences; and the number of problems brought to him for decision is decreased because some activities are given a less prominent place in the organization. The small number of subordinates will decrease the direct relationships and also the cross-relationships between the subordinates themselves. The effectiveness of supervision is increased because of the lessened demands upon the executive for attention to a variety of problems.[13]

Conflict of Responsibilities

Another basic principle is to avoid conflict of responsibilities. "There should be no overlapping, duplication, or conflict between organizational elements. . . .Each individual or organizational unit charged with specific responsibilities should be held responsible for results."[14] The business research expert, Lounsbury Fish, has expressed similar precepts, as follows:

Let us review, for a moment, the considerations which should guide this basic division and subdivision of the total undertaking into components which will meet these exacting requirements - which will permit Management to delegate and decentralize its burdens without sacrificing essential coordination and control.

Each should comprise a logical, separable field of

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[13]Owens, op. cit., pp. 67,68.

[14]Organization Planning for Naval Units, op. cit., pp. 2-4, 2-8.

responsibility - a natural subdivision of the whole task, whose scope and jurisdiction can be clearly defined. These may be relatively distinct subenterprises such as product or regional divisions or subsidiaries; functional divisions, like manufacturing, marketing, accounting; geographical outposts, such as regional, district or branch offices or plants; or staff aspects of the management job.

Each should represent a clear-cut "contract" for which a properly qualified executive, supervisor, or staff man can be held squarely responsible and accountable.

Each should have easy, workable relationships with other associated components, with a natural definable basis of division between them. It should be clear where one responsibility "leaves off" and the next begins.

Each should represent a relatively homogeneous and cohesive field of responsibility, made up of elements which are compatible, related, having some common bond. The responsibility for any single undertaking should not be divided.

Each should contain all elements which are parts of a closely related group, which "belong" together, which comprise a complete entity. Conversely, it should not contain incompatible or "foreign" elements which are more properly parts of other assignments.[15]

"Homogeneous Assignment"

Concurring with the views of Lounsbury Fish on the need for "homogeneous assignment," the U. S. Air Force has stressed that principle concisely, as follows:

> Similar or related jobs should be grouped together within the organization, and personnel should be assigned to jobs in keeping with their experience and skills.[16]

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[15]Lounsbury S. Fish, "Organization-Foundation of Management," Advanced Management, June, 1946, cited by Albert Lepawsky, op. cit., p. 403.

[16]U.S.A.F. Extension Course Institute, U. S. Military Organization, Vol. 1, Part A (Gunter Air Force Base, Alabama, 1954), p. 6.

Protection of Functions of Special Importance

As indicated above, there are strong pressures in the direction of consolidation of some parts of an organization. On the other hand, there are also important reasons why certain other parts of an organization should be kept separated.

William H. Newman has expressed his views on this latter category, as follows:

> If a particular activity is unusually important to the success of an enterprise, it may deserve special recognition in the organization. Not only is the activity likely to be placed in a separate division, but the more important the activity, the higher in the administrative hierarchy is the division attached.
>
> The "adequate attention" criterion is important because of two natural human tendencies. An executive or an operator with a variety of duties cannot give first consideration to each of them, and through pressure of work or lack of interest it is entirely possible that one or more of the duties will be slighted.[17]

Independent, Impartial Staff Coordination and Appraisal

Another important principle is independent, impartial staff coordination and appraisal. According to Organization Planning for Naval Units,[18] "Line functions should be separated from staff functions." Also, based on a research study of the management policies and practices of thirty-one leading industrial corporations, Holden, Fish and Smith have derived the

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[17] William H. Newman, Administrative Action (New York: Prentice-Hall, Inc., 1951), pp. 137, 138.

[18] Organization Planning for Naval Units, op. cit., p. 2-4.

following principles.

1). If the effort of a staff agency is to be expended primarily in behalf of one branch or division of the company, it would seem logical that it be made responsible to the divisional executive concerned. For example, an agency organized for inspection and control of quality would normally be found on the staff of the divisional executive of manufacturing.

2). If, on the other hand, the agency is intended to serve two or more divisions impartially, it should report to general management either directly or in common with other closely related general staff functions.

In order to be fully effective, central staff concerned with such general functions as personnel, organization, cost control, and public relations must be free of department obligation, influence, or bias, and able to take a broad objective viewpoint based solely upon the best interests of the company as a whole. Within their respective fields, these agencies must be in a position to investigate and call attention to unsatisfactory conditions in any division or department of the company, and to initiate steps toward their correction. This is rendered difficult if the agency reports to one of the divisions concerned, because the interests of the staff executive may often conflict with those of his superior. Furthermore, other divisions affected can hardly be expected to receive favorably recommendations coming from the same level of management, particularly where these may be construed as reflecting upon the adequacy of divisional administration. For example, a personnel department attached, say, to manufacturing would probably be handicapped in prescribing for the needs of personnel in the sales departments.

Such agencies, handling important specialized functions of general, rather than divisional concern, therefore, can properly accomplish their purposes only as the agents of general management. Only under such auspices are they in a position to secure the effective support and co-operation of the various divisional executives with whose activities they must properly be concerned.[19]

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[19]Paul E. Holden, Lounsbury S. Fish, and Herbert L. Smith, Top-Management Organization and Control (New York: McGraw-Hill Book Co., Inc., 1951), pp. 37, 38.

Unique Qualifications of Individuals

Authorities on organization generally agree that it is desirable first to construct the "ideal" organization on the basis of specific organization criteria. Then the "ideal" structure can be modified in the light of personality influences. Ernest R. Breech, Chairman of the Board of Ford Motor Company, recently expressed his views on this aspect of organization, as follows:

> Although the organization is initially set along these (orthodox) lines, it does not remain unchanged. So far as we are concerned, no book on organization has ever been written that can be applied dogmatically to any given company. A theoretically sound and logical organizational setup can and often does founder on the hidden shoals of human nature.
>
> While the modern executive may seek guidance from the textbook, he remembers always that he is dealing with individuals and not with theoretical abstractions. Organizations are nothing more or less than groups of people with a common purpose. They must be rearranged from time to time so that the abilities of the management personnel at hand may be used to the greatest effect.[20]

This study does not take into consideration any unique qualifications of present incumbents in top management positions in the Bureau of Ships. However, the study does take account of functions of special current importance.

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[20]Ernest R. Breech, "How Did Ford Do It?", The Journal of Accountancy (February, 1956), p. 34.

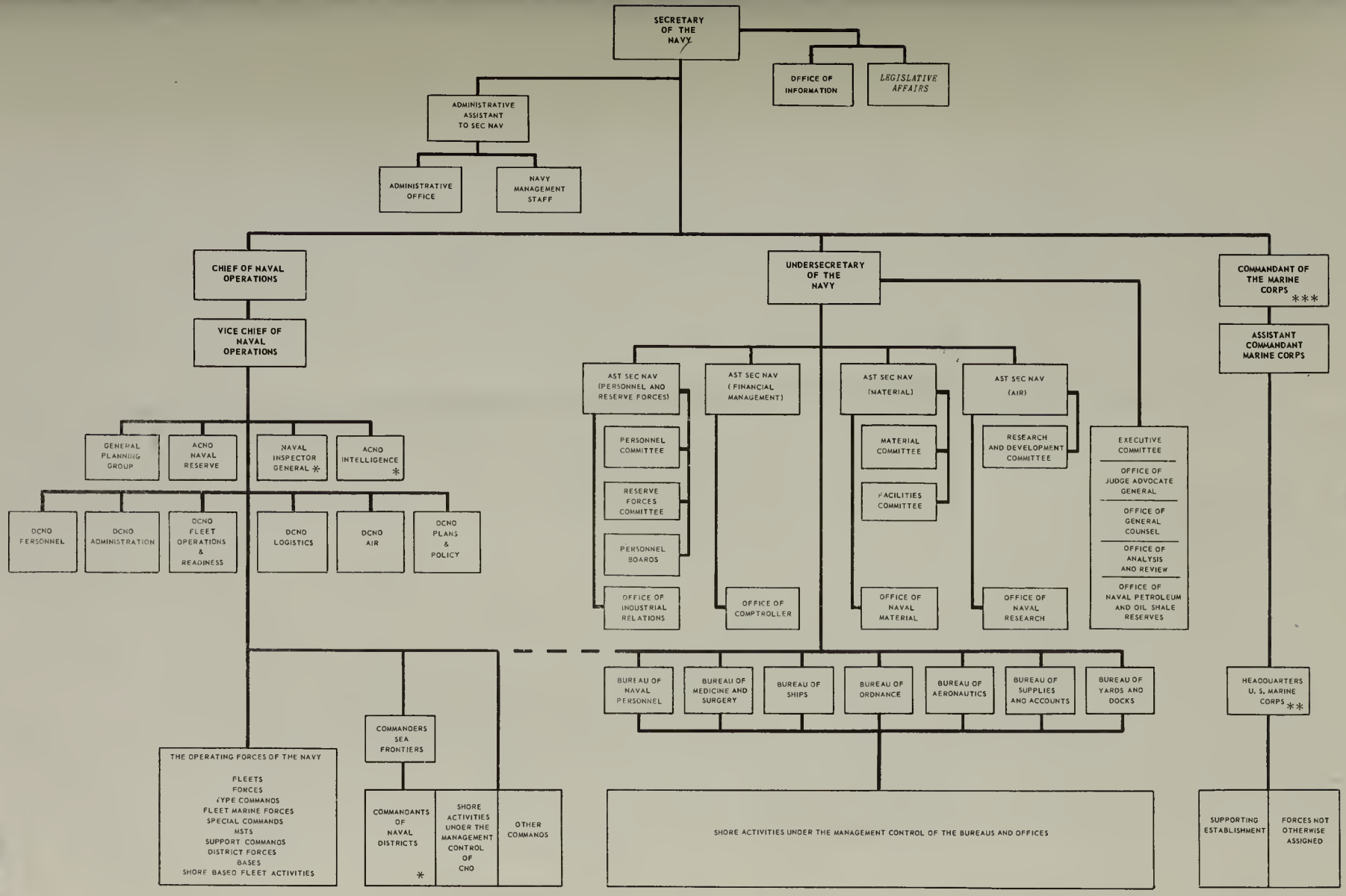
CHAPTER III

PRESENT STATUS, RESPONSIBILITIES, AND ORGANIZATION OF THE BUREAU OF SHIPS

Before analyzing the top management organization of the Bureau of Ships, it is first necessary to understand the role of the Bureau. Broadly speaking, the major functions of the Bureau of Ships consist of designing, building and maintaining the ships of the Navy, including research related thereto. In carrying out these functions the Bureau of Ships serves as an operating agency of the Department of the Navy.

It may be noted from Chart 1 that the Secretary and the Under Secretary of the Navy are the immediate administrative superiors of the Chief of the Bureau of Ships (as well as of the Chiefs of the other bureaus). Functional policy guidance and review are applied to the Bureau of Ships (and to the other bureaus), as follows: personnel, by the Assistant Secretary of the Navy (Personnel and Reserve Forces) and the Office of Industrial Relations; financial management, by the Assistant Secretary of the Navy (Financial Management) and the Office of Comptroller; material, by the Assistant Secretary of the Navy (Material) and the Office of Naval Material; and research and development, by the Assistant Secretary of the Navy (Air) and the Office of Naval Research.

The organization of the Department of the Navy has many



* Additional direct responsibility to SECNAV

** The Chiefs of Bureaus and Offices, and Headquarters, U. S. Marine Corps are accountable directly to UNSECNAV for all matters assigned to Civilian Executive Assistants.

*** Additional direct responsibility to CNO for the readiness and performance of those elements of the operating forces of the Marine Corps assigned to the Operating Forces of the Navy, and, responsible to CNO in his capacity as naval executive for matters assigned by SECNAV.

Approved: C. S. Thomas

Secretary of the Navy

12 MAY 1955

Chart 1

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features in common with large, modern industrial corporations, such as General Motors.[21] Except for the profit motive, the status of the Bureau of Ships in the Navy Department is generally similar to that of an operating division in a large corporation. The Chief of the Bureau may be likened to a general manager; the Assistant Secretaries of the Navy, to vice presidents; the Under Secretary, to an executive vice president; and the Secretary, to the president of a corporation. This study of the top management organization of the Bureau of Ships has been developed on such a premise.

Magnitude of the Operations of the Bureau of Ships

The Annual Financial Report, U. S. Navy Bureau of Ships, Fiscal Year 1955[22] contains information indicating the magnitude of the operations of the Bureau of Ships. During fiscal year 1955 the Bureau spent approximately one billion, eight hundred million dollars to design, build and maintain the ships of the Navy. It was estimated that expenditures for fiscal year 1956 would be at about the same level.

The ship construction and conversion programs have covered all types of vessels with primary emphasis on sub-

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[21]Dale, op. cit., pp. 98-105.

[22]Annual Financial Report, U. S. Navy Bureau of Ships, Fiscal Year 1955 (Washington: Bureau of Ships, Navy Department).

marines, destroyers and aircraft carriers. Expenditures in fiscal year 1955 for construction and conversion amounted to 767 million dollars with an estimate for fiscal year 1956 of 883 million dollars. Of particular interest is the construction program for the large FORRESTAL Class aircraft carriers.

The Bureau of Ships maintains and operates a world-wide shore establishment necessary for ship construction and repair. During fiscal year 1955 the number of activities under the management control of the Bureau of Ships increased from 104 to 117. Approximately 112,000 of the 130,000 employees required are in the eleven naval shipyards and the ship repair facility at San Diego. Next in size of employment are nine laboratories. Other important parts of the shore establishment are the departmental headquarters in Washington, submarine bases, ships departments of naval stations throughout the world, and offices for inspection and liaison with industrial firms having contracts with the Bureau of Ships.

From the above it is obvious that the operations of the Bureau of Ships are of great magnitude in terms of money, manpower, facilities, equipment and technology. Accordingly, the most effective top management organization of the Bureau of Ships is a matter of considerable importance. In the Bureau, assisting the top executives, are about 4,000 civilians and 270 officers.

Responsibilities of the Bureau of Ships, of the Chief, Bureau of Ships, and of the Present Top Management Organization

Prior to analysis, we must also first understand the responsibilities of the Bureau of Ships, of the Chief, Bureau of Ships and of the present top management organization. These responsibilities are summarized in Appendixes II and III, based on the Bureau of Ships Administrative Manual,[23] "Bureau of Ships Notices 5430, of 1 July, 1954 and of 12 July 1955"[24] and "Bureau of Ships Notice 5430.18, of 7 September, 1955".[25]

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[23] Bureau of Ships Administrative Manual (Nav Ships 250-202-7), Revised through Change #32 (Washington: Bureau of Ships, Navy Department, 1956).

[24] "Bureau of Ships Notices 5430, of 1 July, 1954 and of 12 July, 1955 on subject: 'Assistant Chief of Bureau Designations; changes in.'" (Washington: Bureau of Ships, Navy Department).

[25] "Bureau of Ships Notice 5430.18 of 7 Sept., 1955 on subject:'Special Assistant to the Chief, Bureau of Ships for Real Estate, Survey and Review; establishment of'". (Washington: Bureau of Ships, Navy Department).

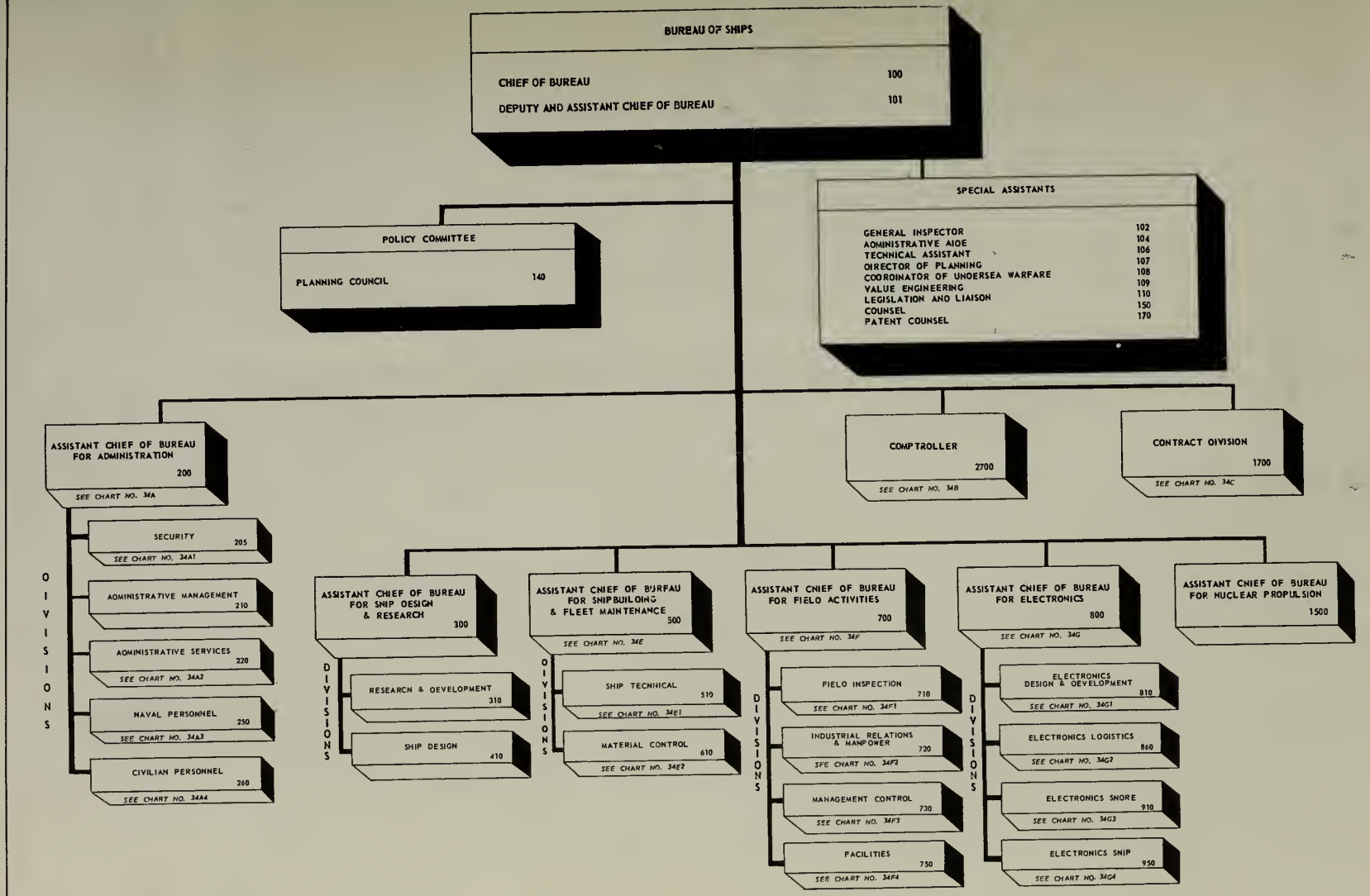
CHAPTER IV

ANALYSIS OF LINE OPERATING GROUPS

Thus far, in this study, we have attempted to set the stage for the analysis phase. We have stated the purpose and scope of the study, invited attention to current major trends influencing the Bureau's organization, presented applicable principles and concepts of organization, and summarized responsibilities. We can now start our analysis. This analysis will be in the form of an appraisal of the present top management organization as measured against the trends and the principles and concepts of organization.

Nature of the Bureau's Basic Organization Structure

Chart 2 shows the present top management organization of the Bureau. This organization is the result of many changes evolved in response to varying circumstances. The Bureau has, in general, stood the tests of both war and peace exceptionally well. The Bureau's organization structure is the "line and staff" type, composed of line operators, staff specialists, and staff assistants. Basically, this "line and staff" organization appears to be the type best suited for carrying out the responsibilities of the Chief of the Bureau. However, as discussed below, there appear to be certain parts of the present organization which are subject to improvement.



PRESENT TOP MANAGEMENT ORGANIZATION

DATE	APPROVED	TITLE OF PARENT OFFICE	TITLE OF BUREAU	CHART NO.
1 JULY 1955	A. S. Mumma, CHIEF OF BUREAU	DEPARTMENT OF THE NAVY	BUREAU OF SHIPS	34

Chart 2

The Two Basic Line Functions

The various responsibilities of the Chief of the Bureau, as summarized in Appendix II, may be condensed into two basic line functions, as follows:

(1) Ship design, procurement, construction, conversion, alteration, repair, maintenance, equipage, and research relating thereto; and

(2) management control of field activities whose primary functions are the design, construction, conversion, alteration, repair, maintenance, or research relating thereto; and supervision and inspection of the foregoing.

(Note: These two basic line functions are an extension of each other).

Groupings Based on Present Organization

Based on the present organization outlined in Appendix III, line operating executives corresponding to these two basic functions may be grouped, as follows:

(1) for ships --

(a) Assistant Chief of Bureau for Ship Design and Research (one phase of his responsibilities);

(b) Assistant Chief of Bureau for Shipbuilding and Fleet Maintenance;

(c) Assistant Chief of Bureau for Electronics (one phase);

(d) Assistant Chief of Bureau for Nuclear Propulsion; and

(2) for field activities --

(a) Assistant Chief of Bureau for Ship Design and Research (one phase);

(b) Assistant Chief of Bureau for Field Activities; and

(c) Assistant Chief of Bureau for Electronics (one phase).

Ships

As noted above, there are now four Assistant Chiefs involved in the basic "ships" line function. These are the Assistant Chiefs of Bureau for Ship Design and Research, Shipbuilding and Fleet Maintenance, Electronics, and Nuclear Propulsion. This present organization and assignment of functions raises questions of coordination, span of control, economy, protection of "infant" technology, conflict of responsibilities, and separation of line from staff. There are serious variances from principles and concepts of organization set forth in Chapter II, above.

Coordination. -- The present situation wherein four Assistant Chiefs are engaged in the various aspects of one line function ("ships") has created problems of coordination. This is particularly true in the case of preliminary designs. The

focus of electronics and nuclear propulsion personnel tends to be fixed on their specialties rather than on the ship as a whole. Accordingly, the overall designs of ships is apt to be not as well balanced as might otherwise be the case. The Assistant Chief for Shipbuilding and Fleet Maintenance also has design responsibilities which require extensive coordination with the Assistant Chiefs for Ship Design and Research, Electronics, and Nuclear Propulsion. Under the existing organization, coordination of design cannot take place below the level of the Chief of the Bureau except insofar as it results from voluntary agreement among the four Assistant Chiefs concerned. Consolidation would result in better coordination.

Span of control. -- Four Assistant Chiefs reporting to the Chief in connection with one basic function ("ships") appears to use up too large a proportion of the Chief's span of control. Later in this study specific recommendations are given to effect reduced span of control.

Economy. -- The costs of an organization to perform a function are, of course, an important consideration. The present organization for handling the "ships" function appears excessively costly. Horizontal coordination between the four Assistant Chiefs requires liaison groups. For example, there are "ship type desks" under both the Assistant Chief for Shipbuilding and Fleet Maintenance and the Assistant Chief for Electronics. In addition, clerical and supervisory costs appear

greater than would be the case with fewer Assistant Chiefs. Since the Bureau of Ships is subject to personnel ceilings, costs in terms of manpower are as important a factor as costs in terms of dollars.

Conflict of responsibilities. -- It may be noted from the summary of responsibilities in Appendix III that the Assistant Chief for Ship Design and Research initiates and is responsible for design until the contract plans and specifications are approved. At that point the Assistant Chief for Shipbuilding and Fleet Maintenance takes over responsibility for development and coordination. Accordingly, there is divided responsibility; no single Assistant Chief can be held responsible for a completely integrated ship design.

Prior to 1942 a similar situation existed. However, in 1942 Ship Design was consolidated with Shipbuilding. The consolidation apparently worked well during the balance of World War II and remained in effect until July, 1954. At that time Ship Design was separated from Shipbuilding (both had been under an Assistant Chief for Ships) and consolidated with Research, reportedly to establish a closer tie between Ship Design and Research. Accordingly, there is now divided responsibility for overall ship design. This situation would be particularly undesirable during wartime. There should be a re-consolidation of Ship Design and Shipbuilding in the interest

of centralized responsibility. Re-consolidation would tighten coordination, shorten communications, reduce time elements, and centralize control over most shipbuilding phases.

Protection of "infant" technology. -- In the Bureau of Ships, electronics and nuclear propulsion, as "infant" technologies, have received special organizational recognition. Electronics attained this status early in World War II; all electronics functions were consolidated in 1942 under a division director reporting directly to the Chief of the Bureau. Later, the division director was re-designated an Assistant Chief. Nuclear propulsion, which is considerably younger than electronics, was placed under an Assistant Chief in July, 1955.

It is considered that sufficient time has elapsed for electronics to reach full maturity. It also appears that separation of "ship" from "shore" electronics and consolidation with other related parts of the Bureau's organization could be effected now without interfering with the rate of technological progress. Such a consolidation would facilitate coordination, reduce the Chief's span of control, and achieve savings in personnel and costs.

There are strong arguments in favor of consolidating nuclear propulsion with other parts of the Bureau. Nuclear propulsion installations have a fundamental effect on the design of a ship, particularly submarines where buoyancy,

stability and space are especially critical factors. Nuclear propulsion has a considerably greater effect on a ship's basic design than does electronics. On the other hand, the advantages of direct access to, and support by, the Chief appear to be the predominant factors at this stage of the development of nuclear propulsion. However, consolidation with other related parts of the Bureau should take place at some indeterminate future date.

Independent, impartial staff coordination and appraisal.- It is interesting to observe that the Assistant Chief for Ship Design and Research has both line and staff responsibilities. Research projects have their origin in the minds of the personnel who are responsible for the design, construction, and maintenance of the ships of the fleet. These groups are located under the Assistant Chief for Ship Design and Research, as well as the Assistant Chiefs for Electronics, Nuclear Propulsion, and Shipbuilding and Fleet Maintenance. Projects are conceived on the basis of operational requirements established by the Chief of Naval Operations. This is a line responsibility.

Project proposals, as approved by the respective division directors and Assistant Chiefs, flow to the office of the Assistant Chief for Ship Design and Research. The Assistant Chief for Ship Design and Research, with the aid of his planning staff, formulates an integrated technical program

which takes into account broad guidance received from the Chief of Naval Operations, Office of Naval Research, Office of the Assistant Secretary of the Navy (Air), and Office of the Assistant Secretary of Defense (Research and Development). This is a staff responsibility.

The plan, when finally approved and funded, is executed by the same bureau sections which submitted proposals in the first place. They begin operations by submitting requests for project orders at the Bureau's laboratories and shipyards. These requests are submitted in turn to the directors of their respective divisions, the office of the Assistant Chief for Ship Design and Research, and the Comptroller. Requests for procurement by contract follow the same course but include finally the Director of Contracts. When funds have been obligated by award of contracts or placement of project orders at laboratories or shipyards, the same sections again assume technical direction of their respective projects. They follow progress closely.

It may be observed from the above that the Assistant Chief for Ship Design and Research has both line and staff responsibilities. His line responsibilities are related to the research projects which are initiated and followed-up by the personnel under his supervision. His staff responsibilities are related to the preparation of an integrated technical

program, covering the research projects for four Assistant Chiefs (including himself). Because of funds limitations, preparation of an integrated program requires the assignment of relative priorities by the Assistant Chief for Ship Design and Research. Accordingly, he is in the difficult position of trying (1) to prepare impartially an integrated priority list containing his own projects as well as the projects for which three other Assistant Chiefs are responsible, and (2) to appraise performance impartially.

The assignment of both line and staff responsibilities to the Assistant Chief for Ship Design and Research is in conflict with the principles of "independent, impartial staff coordination and appraisal," as presented in Chapter II above.

Conclusions. -- The above analysis leads to the following conclusions:

(1) Consolidation of Electronics with other related parts of the Bureau would improve coordination, reduce the Chief's span of control, and result in savings in manpower and funds.

(2) A separation of research staff (coordination and appraisal) responsibilities from line responsibilities currently under the Assistant Chief for Ship Design and Research is required in the interests of impartial handling of the staff responsibilities.

(3) A consolidation of the design responsibilities of the Assistant Chief for Ship Design and Research with the responsibilities of the Assistant Chief for Shipbuilding and Fleet Maintenance would eliminate a conflict of responsibilities that now exists and improve coordination and control over most shipbuilding phases.

Recommendations. -- Accordingly, it is recommended that:

(1) the position of the Assistant Chief of Bureau for Electronics be disestablished;

(2) "shore" electronics be separated from "ship" electronics;

(3) the position of the Assistant Chief of Bureau for Ship Design and Research be disestablished;

(4) research staff responsibilities be separated from ship design line and research line responsibilities, all of which have been under the Assistant Chief for Ship Design and Research;

(5) Ship Design be re-consolidated with Shipbuilding;

(6) the position of Assistant Chief of Bureau for Shipbuilding and Fleet Maintenance be disestablished;

(7) the position of Assistant Chief of Bureau for Ships be re-established, to consist of a consolidation of

a) "Ship" electronics,

b) Shipbuilding and Fleet Maintenance, and

c) All line responsibilities (including Ship Design and line research) currently under the Assistant Chief for Ship Design and Research;

(Note: The recommended organizational locations of "shore" electronics and research staff responsibilities will be covered later in this study).

(8) no change be made at the present time with respect to the position of Assistant Chief of Bureau for Nuclear Propulsion. However, planning should be in the direction of eventual consolidation under the Assistant Chief for Ships.

Field Activities

Management control. -- The major responsibilities included in management control involve personnel ceilings, industrial relations, organization, and facilities. Three Assistant Chiefs are now engaged in management control aspects of the basic "field activities" line function. These are the Assistant Chiefs for Ship Design and Research, and for Electronics, as well as the Assistant Chief for Field Activities. The present situation has created problems arising from a conflict of responsibilities.

Electronics. -- In the case of Electronics, the chief source of difficulty has been in connection with the administration of the "Advanced Base Functional Components Program." As discussed above under "Ships", it appears timely to consolidate Electronics with other related parts of the Bureau. In the event of such a consolidation, "shore" electronics should be consolidated under the Assistant Chief for Field activities.

Laboratories. -- The Bureau of Ships operates nine major laboratories, employing about 7,000 persons and having a plant account value of about one hundred million dollars. Additional development and test work is carried on in eighteen smaller laboratories which operate as divisions of the eleven naval shipyards.

The laboratory portion of the Bureau of Ships' program is planned in advance before the beginning of each fiscal year. As discussed previously, various sections under four Assistant Chiefs initiate research projects. These projects are coordinated into an integrated research program under the jurisdiction of the Assistant Chief for Ship Design and Research. Part of the projects are to be handled under contract, while part are tentatively scheduled for accomplishment in the Bureau of Ships' laboratories.

After being advised of the Bureau's desires as to the projects to be carried out and the Bureau's estimate of funds

to be provided, each laboratory is requested to submit a proposed program for the year. This proposal is reviewed by the Bureau and, in most cases, a conference is held with the laboratory management, out of which is produced the approved program. By this means the Bureau makes the most effective use of the scientific staffs of its laboratories, and maintains a balanced research program within the fiscal limitations imposed.

In fiscal year 1955 the Bureau of Ships expended about seventy-two million dollars for research and development. It is estimated that approximately the same amount will be expended in fiscal year 1956. During recent years approximately half of the funds have been expended for work accomplished in the Bureau of Ships' laboratories, and half for work under contract.

There are strong differences of opinion within the Bureau of Ships as to which Assistant Chief should have management control over personnel ceilings, industrial relations, organization, and facilities for the laboratories. One view is that the staff of the Assistant Chief for Ship Design and Research has a clearer understanding of research requirements and is more sensitive to the needs of the laboratories.

The opposing view offers the following arguments:

1). The Assistant Chief for Field Activities already has a well-balanced staff capable of handling all phases of management control for all field activities.

2). The Assistant Chief for Ship Design and Research does not have at the present time a staff capable of handling all phases of management control of the laboratories. Such a staff under his jurisdiction would represent costly duplication.

3). Management control of laboratories is no more difficult than management control of naval shipyards or other Bureau of Ships' field activities.

4). Separation of management control of laboratories from management control of other field activities would require excessive coordination by the Chief to insure uniformity and balance. This would be particularly true in the case of industrial relations and facilities matters referred to higher levels of the Department of the Navy for review and approval.

5). The staff of the Assistant Chief for Ship Design and Research does not and could not exercise management control over the fifty per cent of the research work that is handled under contract. A similar "buyer-seller" relationship should be considered to exist between the Assistant Chief for Ship Design and Research on the one hand, and the Assistant Chief for Field Activities

in conjunction with the laboratories on the other hand.

6). In the interest of independent, impartial coordination and appraisal, a research coordinating staff should not have line operating responsibilities.

This question has not yet been resolved. As may be noted in Appendix III, a compromise situation now exists. The Assistant Chief for Ship Design and Research and the Assistant Chief for Field Activities are jointly responsible for management control of the laboratories. Such joint responsibility is contrary to sound principles of organization, and has led to a number of avoidable conflicts and misunderstandings.

Conclusions. -- The above analysis leads to the following conclusions:

1). Consolidation of "shore" electronics under the Assistant Chief for Field Activities would facilitate coordination.

2). Joint responsibility for management control of laboratories is highly undesirable.

3). Arguments appear to favor assigning the sole responsibility for management control of laboratories to the Assistant Chief for Field Activities.

Recommendations. -- Accordingly, it is recommended that:

1). "shore" electronics be consolidated under the Assistant Chief for Field Activities; and

2). sole responsibility for management control of the Bureau of Ships' laboratories be assigned to the Assistant Chief for Field Activities.

CHAPTER V

ANALYSIS OF STAFF SPECIALISTS AND STAFF ASSISTANTS

Staff Specialists

Present organization. -- Staff specialists in the present top management organization provide a functional service to the line operators, other staff personnel, and/or advise the Chief of the Bureau. These staff specialists are as follows:

1) Assistant Chief for Administration;
2) Assistant Chief for Ship Design and Research (as discussed previously, his staff responsibilities consist of the coordination of research);
3) Director of Contracts; and
4) Comptroller.

From an analysis of responsibilities and organization structure (Appendixes II and III) and from discussions with cognizant officials, it appears that the present organization satisfactorily meets staff specialist requirements, except in the case of Research and Design.

Research and Design. -- Because more than one Assistant Chief is engaged in line research, there is a continuing need for staff coordination and appraisal. For reasons outlined in Chapter IV, above, staff research responsibilities should be separated from research line and ship design line responsi-

bilities. While there should be a separation between line staff, it is essential for expeditious and economical technological progress that there be close coordination between research and design. This is particularly true from a long-range viewpoint. Otherwise, experience has shown there will be misdirected effort, wasted funds, and slow progress.

The Bureau of Ships has a group of research staff specialists, coordinating and appraising research for the entire Bureau and reporting directly to the Chief. However, there does not exist a similar staff group for all phases of design (hull, machinery, electrical, electronics and nuclear propulsion).

Experience has shown that line operating groups generally do not have the time for contemplative, long-range studies. Line personnel are usually too busily engaged in meeting day-to-day deadlines. One attempt made by the Chief during recent years to provide himself with staff service for long-range design consisted of the establishment of a Ship Design Coordination Committee. Membership on this Committee was on an "additional duty" basis. This Committee was disestablished a short time ago, reportedly because some Ship Design personnel felt that the existence of such a Committee represented a demotion in their own status. Currently, Ship Design personnel are making long-range design staff studies in addition to their regular line duties. It is considered that this latter arrange-

is not conducive to optimum originality of thought and vision.

Conclusions. -- The above analysis leads to the following conclusions:

1). There is a continuing requirement for independent, impartial research staff coordination and appraisal.

2). The Chief also has a requirement for long-range design studies.

3). There should be a close organization tie between research and design.

4). A staff specialist group reporting directly to the Chief appears to be the optimum organization arrangement for independent, impartial research coordination and appraisal and long-range design service.

Recommendation. -- Accordingly, it is recommended that:

1). the position of Assistant Chief of Bureau for Research and Design be established, as a staff specialist; and

2). the present research coordinating group be consolidated with a new staff design group under this Assistant Chief.

Staff Assistants

Present organization. -- The present staff assistants to the Chief of the Bureau are as follows:

1) Inspector General,
2) Administrative Aide,
3) Assistant for Real Estate,
4) Technical Assistant,
5) Director of Planning,
6) Coordinator of Undersea Warfare,
7) Value Engineering,
8) Legislation and Liaison,
9) Counsel, and
10) Patent Counsel.

From an analysis of responsibilities and organization structure (Appendixes II and III) and from discussions with cognizant officials, it appears that the present organization satisfactorily meets staff assistant requirements.

CHAPTER VI

MAJOR CONCLUSIONS AND RECOMMENDATIONS

Major Conclusions

The major conclusions resulting from this study are as follows:

1). The Bureau of Ships has a basically sound, "line and staff" type, top management organization.

2). Certain parts of the organization are subject to improvement.

Major Recommendations

The major recommendations are, as follows, that:

1). the following positions be disestablished:

   a). Assistant Chief of Bureau for Ship Design and Research,

   b). Assistant Chief of Bureau for Shipbuilding and Fleet Maintenance, and

   c). Assistant Chief of Bureau for Electronics;

2). the position of Assistant Chief of Bureau for Ships be re-established, to consist of a consolidation of

   a). "Ship" electronics,

   b). Shipbuilding and Fleet Maintenance, and

   c). All line responsibilities (including Ship

Design and line research) currently under the Assistant Chief for Ship Design and Research;

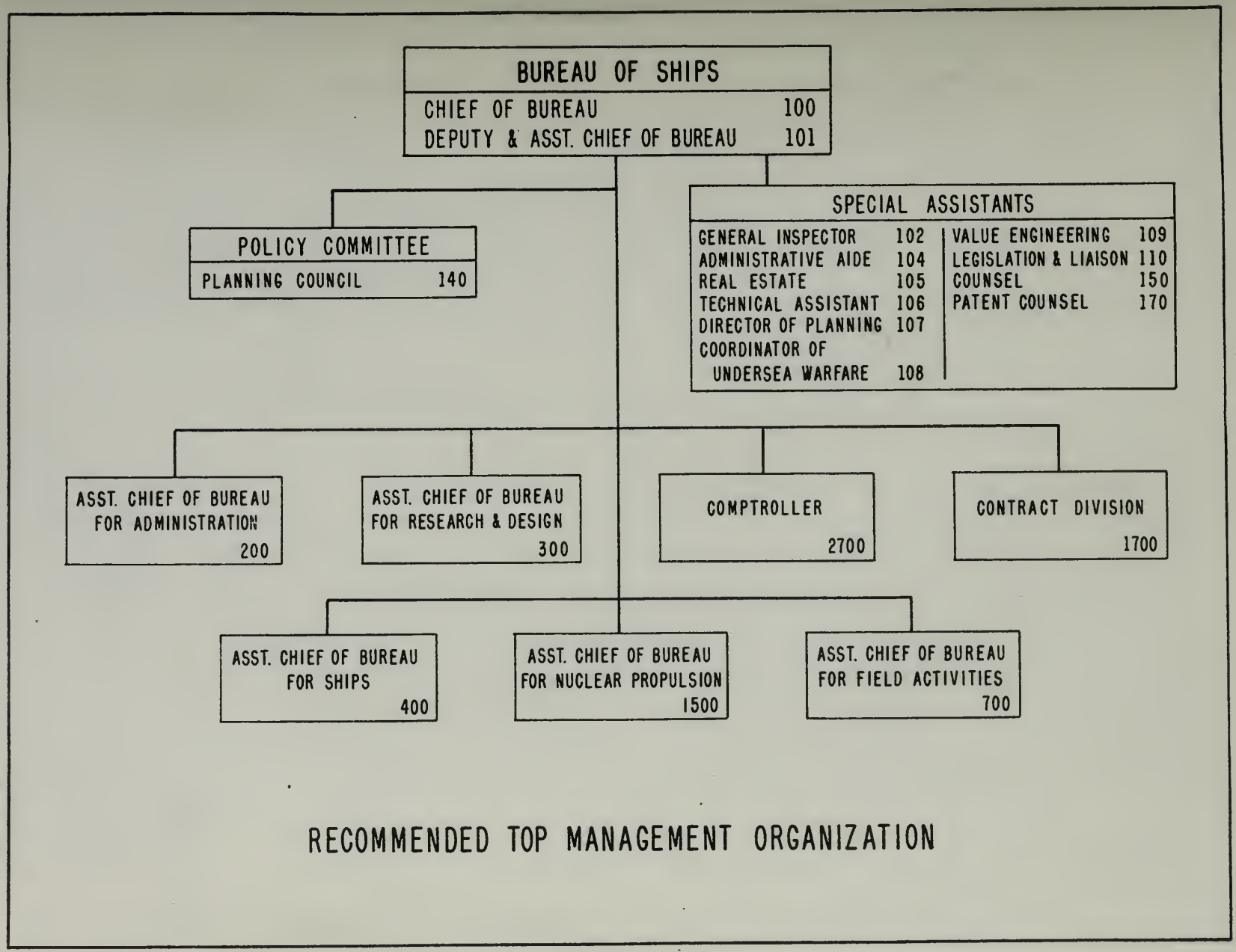
3). the position of Assistant Chief of Bureau for Research and Design be established, as a staff specialist, having responsibilities primarily for coordination of research and for long-range design;

4). "shore" electronics be consolidated under the Assistant Chief of Bureau for Field Activities;

5). sole responsibility for management control of the Bureau of Ships' laboratories be assigned to the Assistant Chief of Bureau for Field Activities; and

6). no change be made at the present time with respect to the position of Assistant Chief of Bureau for Nuclear Propulsion. However, planning should be in the direction of eventual consolidation under the Assistant Chief of Bureau for Ships.

Chart 3 shows the recommended top management organization for the Bureau of Ships.


BUREAU OF SHIPS
CHIEF OF BUREAU 100
DEPUTY & ASST. CHIEF OF BUREAU 101
POLICY COMMITTEE
PLANNING COUNCIL 140
SPECIAL ASSISTANTS
GENERAL INSPECTOR 102
ADMINISTRATIVE AIDE 104
REAL ESTATE 105
TECHNICAL ASSISTANT 106
DIRECTOR OF PLANNING 107
COORDINATOR OF UNDERSEA WARFARE 108
VALUE ENGINEERING 109
LEGISLATION & LIAISON 110
COUNSEL 150
PATENT COUNSEL 170
ASST. CHIEF OF BUREAU FOR ADMINISTRATION 200
ASST. CHIEF OF BUREAU FOR RESEARCH & DESIGN 300
COMPTROLLER 2700
CONTRACT DIVISION 1700
ASST. CHIEF OF BUREAU FOR SHIPS 400
ASST. CHIEF OF BUREAU FOR NUCLEAR PROPULSION 1500
ASST. CHIEF OF BUREAU FOR FIELD ACTIVITIES 700

RECOMMENDED TOP MANAGEMENT ORGANIZATION

Chart 3

APPENDIX I

LIST OF OFFICIALS OF THE BUREAU OF SHIPS WITH WHOM DISCUSSIONS WERE HELD

Bethea, J. S., Capt., Director, Ship Design Division.

Bull, W. I., Capt., Assistant Chief for Electronics.

Burzynski, R. O., Capt., Assistant Chief for Administration.

Carroll, D. L., Capt., Director, Field Inspection Division.

Crane, J. W., Director, Administrative Management Division.

Cronin, R. E., R. Adm., Assistant Chief for Field Activities.

Elliott, C. F., Assistant for Legislation and Liaison.

Farrin, J. M., Jr., Capt., Director, Ship Design Division.

Garrels, R. E., Capt., Director, Management Control Division.

Honsinger, L. V., R. Adm., Assistant Chief for Shipbuilding and Fleet Maintenance.

Mandelkorn, R. S., Capt., Comptroller.

Manseau, B. E., R. Adm., Deputy and Assistant Chief of the Bureau.

McQuilkin, J. H., Capt., Head of Preliminary Design and Ship Protection Branch.

Mumma, A. G., R. Adm., Chief of the Bureau.

Peck, C., Former Director, Industrial Relations and Manpower Division.

Rice, J. E., Capt., Director, Naval Personnel Division.

Slaven, F. W., Capt., Assistant to Director of Planning.

Stevens, W. L., Head of Management Engineering Section, Management Control Division.

Tilburne, E. R., Capt., Director, Research Division.

APPENDIX II

RESPONSIBILITIES OF THE BUREAU OF SHIPS AND OF THE CHIEF, BUREAU OF SHIPS[26]

The Bureau of Ships

RESPONSIBILITIES: The responsibilities assigned the Bureau of Ships are set forth in Chapter 4 of the Navy Regulations, as follows:

(a) The design, procurement, construction, repair, and research pertaining thereto, of vessels, amphibious craft and vehicles, boats, surface targets, barges, and service craft of the Navy, including all related matters not assigned to other bureaus of offices, and excluding service craft assigned for control to the Bureau of Yards and Docks.

(b) The preparation of studies and tentative designs that may be requested by the Chief of Naval Operations as a basis for recommendations to the Secretary of the Navy on new vessels; and, following approval by the Secretary of the Navy, the development of designs, in consultation with other bureaus and offices concerning matters under their technical control, to achieve the required military and functional characteristics, structural strength, and seaworthiness.

(c) The design, development, procurement, and distribution of:

(1) Materials and appliances for defense against chemical, biological, and radiological warfare in ships, and other water-borne craft.

(2) Respiratory protective devices, diving equipment, mine countermeasures, submarine rescue methods and equipment, and submarine escape training facilities.

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[26] Bureau of Ships Administrative Manual, op. cit., pp 100-1 to 100-4.

(3) Special devices of the Naval Communication Service, and radio, radar, and sonar equipment and accessories for use ashore.

(d) Conduct and coordinate studies and investigations associated with the phenomena of radiological contamination and decontamination against radioactivity; and provide data necessary for development, application, and procurement responsibilities assigned to other bureaus and offices in these fields.

(e) Establishing the specification and inspection procedures necessary to insure the desired quality of fuel and lubricants for use in propulsion and auxiliary machinery and equipment in naval vessels.

(f) Provision of equipage for the salvaging of sunken and stranded vessels, including the procurement of services from salvage agencies outside the Navy. The supervision of major operations involving salvage of stranded and sunken vessels shall also be the responsibility of the Bureau of Ships.

(g) Maintaining current lists of all vessels and craft (except air craft), including service craft of the Navy, showing their classification, characteristics, and other pertinent data; and publishing these lists periodically for the information of the Navy Establishment.

TECHNICAL CONTROL: The Bureau of Ships shall exercise technical control, in addition to that implicit in the responsibilities enumerated above, of the following:

(a) The alteration, repair, and up-keep of hull, machinery, and equipment of naval ships, boats, and craft; and the operating standards and procedures pertinent thereto.

(b) Standards and procedures for the dry-docking of all naval vessels.

(c) Methods and procedures for salvaging stranded and sunken vessels.

MANAGEMENT CONTROL: The Bureau of Ships shall exercise management control of those commands and organizations estab-

lished as separate activities of the shore establishment whose primary functions are:

(a) Design, construction, and repair of ships, boats, and other surface and subsurface craft.

(b) Research, test, and development pertaining to ship-building, ship propulsion, and equipment under its control.

(c) Supervision and inspection of the foregoing.

Chief of Bureau

RESPONSIBILITIES: The Chief of the Bureau of Ships is responsible to the Secretary of the Navy for the execution of the duties and responsibilities assigned to the Bureau of Ships. He is delegated additional responsibility by the Secretary of Navy and other competent authority as follows:

1. Naval Technical Assistant: As a Naval Technical Assistant, the Chief of the Bureau of Ships is responsible for the discharge of all duties assigned to the Bureau of Ships; acts as technical adviser and assistant to the Secretary of the Navy, the Civilian Executive Assistants, and the Chief of Naval Operations, in the formulation of policies and procedures governing the administration of the Naval Establishment; is responsible, as applicable and within limits of his assigned field of authority for:

   (a) The research in, and the design, development, procurement, production, distribution, maintenance, and readiness of material and facilities.

   (b) The procurement, training, administration, and assignment of personnel.

   (c) The management control of activities assigned for that purpose.

   (d) Technical control of matters assigned.

   (e) The evaluation of, and report upon, the adequacy of naval and industrial production facilities to meet the needs of the Naval Establishment in time of war.

(f) The control, subject to the provisions of law, of funds appropriated and allocated for the performance of the work of the Bureau of Ships, and the preparation of estimates for funds required to carry out approved plans and directives.

2. Coordinator of Shipbuilding: As "Coordinator of Shipbuilding" for the Naval Establishment, the Chief of the Bureau of Ships is delegated responsibility by the Secretary of Navy for:

(a) Issuing orders, as may be necessary, direct to bureaus and offices concerned in order to effect timely delivery of needed materials for which they are responsible at the specified shipbuilding and ship-repair activities.

(b) Representing the Secretary of Navy for the Navy's interests in shipbuilding and in shipbuilding facilities of other Government agencies and private industry.

(c) Issuing written orders or instructions relating to the coordination of shipbuilding for the Naval Establishment by direction of, and considered as emanating from, the Secretary of the Navy.

3. Coordinator of Shipbuilding, Conversion and Repair: As "Coordinator of Shipbuilding, Conversion, and Repair" for the Department of Defense, the Chief of the Bureau of Ships is delegated responsibility by the Chief of Naval Operations for:

(a) "planning for mobilization and for coordinating repairs and conversions within the continental limits of the United States to . . . ships and watercraft (of the Department of Defense), and of representing the Department of Defense in coordinating such matters with the Maritime Administration and other agencies. This coordinating responsibility will be effective upon the initiation of hostilities or upon declaration of a national emergency. The order of building, conversion and repair shall be in accordance with priorities established by the Chief of Naval Operations for naval vessels and craft, and by other competent authority, as appropriate, for other ship and craft."

4. Coordinator of Ship Repair and Conversion for the Department of Defense and Department of Commerce.

5. As assigned by the Chief of Naval Material, on 25 April 1950, the Chief of the Bureau of Ships is responsible for the purchase of ships and other watercraft for the Department of Defense (except combat ships and landing craft previously assigned to Bureau of Ships cognizance, and floating drydocks).

6. As set forth in OPNAVINST 4700.9 of 14 January 1953, the Chief of the Bureau of Ships is responsible for the construction and conversion of all commissioned (USS) and in-service (USNS) ships administratively assigned, or to be assigned, to the Military Sea Transportation Service.

LIAISON RELATIONSHIPS: The Chief of the Bureau of Ships maintains liaison relationships with the Secretary of the Navy, other Navy Department offices, other Federal agencies, private industry and other activities as necessary in the performance of duties described above.

APPENDIX III

RESPONSIBILITIES OF THE PRESENT TOP MANAGEMENT ORGANIZATION OF THE BUREAU OF SHIPS[27]

Code	Position
101	DEPUTY AND ASSISTANT CHIEF OF BUREAU, ASSISTANT COORDINATOR OF SHIPBUILDING, AND ASSISTANT COORDINATOR OF SHIPBUILDING, CONVERSION AND REPAIR: The principal executive assistant to the Chief of the Bureau.
102	INSPECTOR GENERAL: Inquires into and reports to the Chief of the Bureau as directed, upon all matters which affect the efficiency and economy of the Bureau of Ships and assigned field activities.
104	ADMINISTRATIVE AIDE: Assists the Chief of the Bureau in general administrative matters and performs special assignments as directed.
105	ASSISTANT FOR REAL ESTATE: Is responsible for: (a) Conducting a survey of all present and prospective use of real estate in which the Bureau of Ships has an interest; (b) Establishing liaison with other Government agencies as appropriate for this report. (c) Developing the Bureau's position regarding the future status of all such real estate, and making required reports to higher authority.
106	TECHNICAL ASSISTANT: (a) Collects and analyzes data, and prepares manuscripts for books on general subjects relating to the work of the Bureau where the scope is broader than that of interested Bureau subdivisions.

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[27] Bureau of Ships Administrative Manual, "Bureau of Ships Notices 5430 of 1 July, 1954 and of 12 July, 1955," and "Bureau of Ships Notice 5430.18 of 7 Sept., 1955," op. cit.

(b) Renders technical assistance and consultant services to the various technical subdivisions of the Bureau.

(c) Performs other special tasks of a technical nature as assigned by the Chief of the Bureau.

107 DIRECTOR OF PLANNING: Provides staff assistance to the Chief of the Bureau in coordinating Bureau planning as follows:

(a) Conducts long range planning for current and anticipated programs from the viewpoint of relationship of Bureau programs to each other and to the overall Bureau mission. Considers the impact of such programs on current inter-Bureau and office organizational structure, and recommends to the Chief of the Bureau policies and general plans for implementing them.

(b) As directed by the Chief of the Bureau, analyzes for action matters not wholly within the cognizance of any one Assistant Chief or head of Bureau office; recommends to the Chief of the Bureau policies and general plans for accomplishing actions directed. Matters already assigned to one of the operating divisions of the Bureau for coordination will continue to be coordinated by the assigned division.

(c) Coordinates mobilization planning and acts as a central source of information in regard to such planning. In accomplishing this responsibility:

(1) Receives all correspondence and material addressed to the Bureau relating to mobilization planning; analyzes and refers to the proper division for action; reviews all mobilization planning prepared by the Bureau divisions, including related correspondence.

(2) Issues necessary instructions to the Bureau divisions for preparation of mobilization plans.

(d) Performs other duties as assigned by the Chief of the Bureau.

108 COORDINATOR OF UNDERSEA WARFARE: Provides staff assistance to the Chief of the Bureau as follows:

(a) Coordinates within the Bureau the plans, procedures and programs associated with undersea warfare in all its phases of research, development, construction, and maintenance consistent with CNO directives. Undersea warfare includes submarine and anti-submarine warfare, harbor defense, mine and torpedo countermeasures, and defense against underwater atomic explosions.

(b) Reviews Bureau technical programs for their impact on each other and the overall Bureau mission.

(c) Maintains primary liaison with the Chief of Naval Operations and other Bureaus and activities of the Naval Establishment in matters relating to undersea warfare.

(d) Coordinates the Air Defense Program within the Bureau.

109 VALUE ENGINEERING: Provides staff assistance to the Chief of the Bureau in coordinating the Value Engineering Program.

110 ASSISTANT FOR LEGISLATION AND LIAISON: Provides staff assistance to the Chief of the Bureau on Bureau legislative and public information matters.

140 PLANNING COUNCIL: Consists of Chief of Bureau, Deputy Chief, Assistant Chiefs, Comptroller, Director of Contracts, Director of Planning and such other members as may be appointed by the Chief of the Bureau. Assists Chief in policy formulation, discusses problems of policy implementation, and provides a forum for the exchange of information on current and planned projects.

141 PLANNING COUNCIL SECRETARIAT: Furnishes such assistance as is required by the Planning Council in carrying out its functions.

150 OFFICE OF COUNSEL: Provides staff assistance to the Chief of the Bureau in connection with all matters pertaining to business or commercial law (except patent matters). These include the legal aspects of the following: Procurement policies and procedures, contract

forms and clauses, property disposition and leases, contract settlements, claims arising out of contracts, research and development problems, and fiscal problems.

170 PATENT COUNSEL: Provides staff assistance to the Chief of the Bureau on patent and related matters.

200 ASSISTANT CHIEF OF BUREAU FOR ADMINISTRATION: RESPONSIBILITIES: The Assistant Chief of Bureau for Administration is responsible to the Chief of the Bureau for coordinating and supervising the development and operation of Bureau administrative and management policies and programs. This includes the formulation, interpretation and administration of the following programs:

(a) Internal and external security programs for Bureau classified matter.

(b) Management planning and analysis to improve Bureau organization, methods and procedures of operation.

(c) Office services, including mail, telephone, reproduction services, office equipment and supplies, records, transportation, building maintenance and space.

(d) Forms and records management, directives control system, tabulating systems, electric computer system, and office equipment standards.

(e) Bureau publications program, including photographic services.

(f) The training and assignment of naval personnel, both regular and reserve, and including Engineering Duty Officers.

(g) Bureau and Navy Department civilian personnel policies and programs, including training, recruitment, employee relations, and related matters.

300 ASSISTANT CHIEF FOR SHIP DESIGN AND RESEARCH

Ship Design Responsibilities

(a) Prepares design of all naval ships including new classes, conversions, and major alterations;

small boats and landing craft; experimental ship propulsion installations; and conversions of merchant vessels for naval use. Within the Ship Design and Ship Technical Divisions, responsibility for preparation of specific portions of the general and detail specifications will be assigned jointly by Codes 300 and 500. In the preparation of ship designs, the advice and assistance of the Ship-Technical Division shall be obtained. Major alterations are defined as those which affect military characteristics, general strength, primary water-tight subdivision or stability; or involve major changes in arrangements; or major changes in entire systems where such changes materially affect weight or departures from the contract plans, specifications or approved design standards.

(b) Maintains records of the stability of naval ships, and initiates action to insure that all naval ships are adequately stable and seaworthy.

(c) Initiates research and development projects relating to ship design, construction, stability, and propulsion systems.

(d) Maintains Bureau liaison with the Chief of Naval Operations (Board of Inspection and Survey) regarding standardization trial recommendations.

(e) Is responsible for the final preparation and revision of general and detail specifications as a whole, certain portions of which are prepared, under the direction of the Ship Design Division, by branches cognizant of components, systems or equipment contained in such specifications. Design parameters submitted by Ship-Technical Division in conflict with design of the ship as a whole shall be adjudicated by the Ship Design Division in liaison with cognizant technical branches and shall be satisfactory in so far as practicable to the Ship-Technical Division.

(f) Provides drafting assistance to the Ship-Technical Division, as required.

LIAISON RELATIONSHIPS: Is charged with maintaining liaison with the following:

(a) Other offices and bureaus, as required in the preparation of ship designs.

(b) The Office of the Chief of Naval Operations, the Military Sea Transportation Service, and the Maritime Administration concerning the design of vessels to be built under the Merchant Marine Act of 1936 as amended.

(c) The Maritime Administration concerning the design of naval auxiliaries to be built for the Navy by the Maritime Administration.

Research Responsibilities

The Assistant Chief of the Bureau for Ship Design and Research is responsible for the administration and coordination of Bureau research and development programs. The discharge of this function includes the following responsibilities:

(a) Plans and conducts research and development programs contributing to the fund of scientific knowledge upon which the Navy, and the Bureau, depends for the success of its ship design and research programs.

(b) Coordinates the Bureau research and development programs within the Bureau, Bureau laboratories, and outside agencies.

(c) Formulates and executes fiscal program in support of Bureau research and development programs.

(d) Develops Bureau standardization and conservation program and policies; coordinates Bureau participation in Federal and Military standardization and preparation of purchase specifications.

(e) Maintains technical and scientific reference library facilities, including intelligence information and materials; coordinates the collection and evaluation of technical intelligence information required by the Bureau, the Chief of Naval Operations, and agencies participating in Bureau research and development programs.

(f) Coordinates development and preparation of data relating to progress and priority of research and

development projects for distribution and release to the office of the Chief of Naval Operations and appropriate agencies.

(g) Coordinates records of service performance of material and equipment in the fleet; assembles and analyzes data relating to endurance rating of naval vessels.

(h) Establishes specifications and inspection procedure to assure quality control of fuels and lubricants used in propulsion and auxiliary machinery and equipment in naval vessels.

(i) Establishes standards and specifications for basic materials.

(j) Exercises management and technical control over Bureau of Ships laboratories in the areas of program funds, and in collaboration with the Field Activities divisions, over facilities, manpower, and organizational structure.

(k) Exercises management and technical control over foreign U. S. naval inspection offices for petroleum.

LIAISON RELATIONSHIPS: In carrying out the above duties, maintains liaison relationships with other Navy, Defense, and Federal activities; also with private industry, professional, and technical societies, foreign governments, and international organizations.

500 ASSISTANT CHIEF OF BUREAU FOR SHIPBUILDING AND FLEET MAINTENANCE

RESPONSIBILITIES: The Assistant Chief of Bureau for Shipbuilding and Fleet Maintenance (Code 500) is responsible for procurement, construction, repair, and maintenance of vessels, amphibious craft and vehicles, boats, surface targets, barges, and service craft of the Navy (except service craft assigned for control to the Bureau of Yards and Docks); for research pertaining thereto (in collaboration with Code 300); for development and coordination of design of ships and for conversion of ships (after approval of contract plans and specifications); for Bureau inventory management policies and for inventory management for Bureau of Ships special material ("S" cognizance); and for the planning, preparation, and justification of budgets and the administration of funds to support programs

under his cognizance. In accomplishing these functions, the Assistant Chief of Bureau for Shipbuilding and Fleet Maintenance is responsible for:

(a) Meeting the requirements specified by the Chief of Naval Operations regarding design, construction, and alteration of naval vessels.

(b) Basic and detailed production planning and scheduling of the construction or conversion of vessels.

(c) Stability characteristics and seaworthiness of naval vessels under construction and in service.

(d) Research, development, and tests of materials and components and associated materials and systems, except for equipment under the cognizance of the Assistant Chief of Bureau for Electronics; furnishing the Ship Design and Research Divisions with technical data, advice, and information to assist those Divisions in conducting research and preparing and establishing standards.

(e) Development of nuclear energy propulsion for ships; research, development, and testing of systems and equipment in connection therewith.

(f) Materials and appliances for defense against atomic, chemical, and biological warfare.

(g) Respiratory protective devices, mine and torpedo countermeasures, submarine rescue methods, equipment, and escape training facilities.

(h) Preparation of vessel allowances, timely assembly of initial outfitting materials, and determination of requirements, production planning, storage, and distribution of materials over which the Bureau has cognizance.

(i) Establishing preservation methods and standards for inactive vessels.

(j) Bureau of Ships matters relating to arming of merchant vessels.

(k) Supervision of ship salvage service, including the procurement and design of diving and salvage equipment.

(l) Establishing and promulgating suitable operating and maintenance procedures or instructions to the naval service.

(m) In collaboration with forces afloat, adequate and effective repair and maintenance of ships of the Active Reserve Fleets.

(n) Cataloging of Bureau of Ships special material required in the construction and repair of naval vessels; preparation of supply-demand reviews, usage, and interchangeability tables for such materials.

LIAISON RELATIONSHIPS: The Assistant Chief of Bureau for Shipbuilding and Fleet Maintenance is responsible for effecting appropriate liaison with the Secretary of the Navy, the Chief of Naval Operations, the Bureau of Aeronautics, the Bureau of Ordnance, and other bureaus, boards, and offices of the Navy Department; the Department of Defense; other Government agencies; foreign nations; and private industry.

700 ASSISTANT CHIEF OF BUREAU FOR FIELD ACTIVITIES RESPONSIBILITIES: The Assistant Chief of Bureau for Field Activities serves as general manager of those shore activities under the management control of the Chief of the Bureau, except that Bureau laboratories are under the technical control of the Assistant Chief of Bureau for Ship Design and Research, who collaborates with Code 700 in the management of these laboratories.

(a) The Bureau of Ships exercises management control of those commands and organizations established as separate activities of the shore establishment whose primary functions are:

(1) Design, construction, and repair of ships, boats, and other surface and subsurface craft.

(2) Research, test, and development pertaining to shipbuilding, ship propulsion, and equipment under its control.

(3) Supervision and inspection of the foregoing.

(b) The Assistant Chief of the Bureau for Field Activities as general manager of shore activities

is responsible to the Chief of the Bureau for the following: (In the case of laboratories, see RESPONSIBILITIES).

(1) The organizational structure and operating procedures used by the field activities.

(2) The staffing of the field facilities with naval and civilian personnel.

(3) The review and recommended distribution of work to field activities, private shipyards, and industrial plants.

(4) The maintenance of the field facilities in a state of readiness to carry out their missions.

(5) The allocation of industrial mobilization requirements for ships and components and the administration of industrial mobilization planning in the field activities.

(6) The physical security of the field activities.

(7) The efficiency of operation of the field activities.

(8) The acquisition, operation, leasing, preservation, security, and disposal of all government-owned industrial reserve plants and shipyards under the jurisdiction or sponsorship of the Chief of the Bureau of Ships.

(9) The administration of the Navy Shore Development Program with respect to activities under the management control of the Bureau of Ships.

(10) The administration within the Bureau of Ships of the Advanced Base Functional Components Program.

(11) The preparation of consolidated catalogues of materials and equipment required for harbor defense and the overall administration within the Bureau of Ships of the assembly of materials and equipment for the Harbor Defense Program.

(12) The preparation of assigned budget estimates for carrying out approved Program Objectives of the Chief of Naval Operations.

(13) The control of funds alloted to the Field Activities Divisions.

(14) The technical development of specifications for machine tools, loose and hand tools, and industrial equipment used by the field activities. Initiation of procurement, establishment of standard practices for the use and maintenance, and inventory control of the machine tools, loose and hand tools, and industrial equipment.

(15) The administration of an industrial relations and manpower program at Bureau of Ships field activities to deal with matters such as employment, wages, training, position classification, performance ratings, promotions, demotions, discipline, employee relations, morale, manpower and housing and labor relation problems at plants of Bureau of Ships contractors.

800 ASSISTANT CHIEF OF BUREAU FOR ELECTRONICS
RESPONSIBILITIES: The Assistant Chief of Bureau for Electronics, (Code 800) is responsible to the Chief of the Bureau for the direction and coordination of electronics responsibilities assigned to the Bureau of Ships. The Electronics Divisions (Codes 800 thru 995) are responsible for the design, development, procurement, repair, and maintenance of electronics equipments, (except ordnance fire control and interior communication equipments) for use in ships, amphibious craft, and vehicles, boats, surface targets, barges, and service craft of the Navy, and for the design, development, procurement, and distribution of special devices of the Naval Communication Service and of radio, radar, and sonar equipments, and accessories for Navy use ashore. In accomplishing this objective, the Electronics Divisions are responsible for:

(a) Preparing studies and tentative designs as required to enable the Department of the Navy to improve the performance characteristics of shipboard electronics equipments and systems, including equipment for the

shore end of electromagnetic or acoustic intelligence links for detection of or communication with ships or overseas aircraft.

(b) Making suitable recommendations to the Ship Design and Research Divisions to assist those divisions in the preparation of design studies for submission to the Ship Characteristics Board.

(c) Meeting the requirements specified by the Chief of Naval Operations regarding military characteristics prescribed for Bureau of Ships electronics equipment.

(d) Assisting the Shipbuilding and Fleet Maintenance Divisions to meet required ship characteristics insofar as electronics equipment design and installation, electronics repair facilities, and radio and sonar interference reduction techniques are concerned.

(e) Submission of recommendations to the Chief of Naval Operations as a basis for the establishment of priorities and characteristics for shipboard electronics equipment.

(f) Establishing electronics and oceanographic research and development programs in collaboration with the Ship Design and Research Divisions.

(g) Preparation of that portion of the Bureau's budget, in collaboration with the Comptroller Divisions, relating to the major procurement of electronics equipment, replacement, maintenance and major repair programs and research and development in the electronic sciences in support of the Bureau electronics design responsibilities.

(h) Establishing the specifications and technical inspection procedures necessary to insure the desired quality of all electronics material used by the Navy.

(i) Maintaining current lists of all electronics equipment for which it has design responsibility, showing the classification, characteristics, and other pertinent data, and publishing these data periodically for the information of the Naval Establishment.

(j) Design, development, and procurement of test equipment and tools peculiar to the repair of electronics equipment.

(k) Supervision of the method of preparing ship and shore allowance lists for electronics components.

(l) Establishing and promulgating operating and maintenance procedures and instructions for electronics equipment for which the Bureau has design responsibility.

LIAISON RELATIONSHIPS: The Assistant Chief of the Bureau for Electronics is responsible for effecting proper liaison with the Secretary of the Navy, the Chief of Naval Operations, the Bureau of Aeronautics, the Bureau of Ordnance, and other bureaus, boards, and offices of the Navy Department; the Department of Defense, and other Government agencies; and private industry.

1500 ASSISTANT CHIEF OF BUREAU FOR NUCLEAR PROPULSION RESPONSIBILITIES: The Assistant Chief of Bureau for Nuclear Propulsion is responsible for:

(a) Acting as lead activity and technical coordinator for developmental or new design nuclear propulsion plants for naval vessels. The present working relationship between the Nuclear Power Division and Ship Design Division will continue unchanged.

(b) Responsible for the design, development, procurement and maintenance of all nuclear components, directly associated systems and over-all propulsion plant control. Collaborate with other Divisions of the Bureau as may be necessary to expeditiously complete this work.

(c) Research and development projects pertaining to nuclear propulsion development.

(d) The Assistant Chief of Bureau for Nuclear Propulsion may deal directly with Supervisors of Shipbuilding and naval shipyards on technical matters, but will work with the Ship Technical Division to assure coordination between the nuclear propulsion plant and other portions of the vessel.

(e) Correlating, with the Atomic Energy Commission, its field activities and other outside activities, projects and actions in the Bureau's interest in matters pertaining to nuclear propulsion development.

(f) Establishing and maintaining training programs connected with nuclear propulsion, coordinating such training at naval shipyards with the Assistant Chief of Bureau for Field Activities.

1700 CONTRACT DIVISION

RESPONSIBILITIES: The Contract Division, except for the rendering of legal and engineering advice and services, and consistent with Procurement Instructions, Bureau of Ships, is responsible for and has supervision of all matters pertaining to:

(a) Negotiation, preparation, non-engineering administration, and termination of all contracts for ships, main propelling machinery, auxiliary equipment, including electronics equipment, and other Bureau of Ships special material.

(b) Processing within Contract Division of requisitions and requirements documents for material purchased for the Bureau of Ships by other bureaus or departments.

(c) Purchase of materials over which the Bureau of Ships has procurement responsibility, for other bureaus or departments.

(d) Preparation and maintenance of the Bureau's bidders lists, including necessary interviews and related correspondence with manufacturers.

LIAISON RELATIONSHIPS: In performing the above functions, the Contract Division shall maintain the following liaison:

(a) With Office of Naval Material for procurement policy.

(b) With other Navy Department activities on contracting matters.

(c) With other Government departments in connection with coordinated procurement.

(d) With Maritime Commission in shipbuilding contractual matters.

2700 COMPTROLLER
RESPONSIBILITIES:

(a) Prepares, in final form, Bureau budgets, requests for apportionment and budget activity allocations and the allocation of funds to projects.

(b) Reviews and approves all requests for the issuance of documents committing, obligating, or authorizing the expenditure of Bureau of Ships appropriations and funds.

(c) Formulates, establishes, generally supervises, and coordinates all policies and procedures required for budgeting, accounting, and auditing activities of the Bureau of Ships.

(d) Accounts for and conducts audits of Bureau appropriations and funds, and prescribes the type and content of all official accounting and finance records to be maintained.

(e) Prepares budgetary, fiscal and accounting reports required by law and regulations and as required by responsible management divisions of the Bureau for internal use.

(f) Exercises general supervision of budgetary and accounting operations to assure administration of appropriations in accordance with law, regulations, and Bureau policy.

LIAISON RELATIONSHIPS: In carrying out the responsibilities listed above, liaison is maintained as follows:

(a) With the Comptroller of the Navy, the Office of the Comptroller of the Department of Defense, and the Bureau of the Budget on accounting, budget and appropriation matters.

(b) With other bureaus and offices of the Department of the Navy on budget and accounting matters.

(c) With other Government agencies on budget and accounting matters.

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